

Scale-Up: The CASE for Agriculture Education in Iowa

Overview: Curriculum for Agricultural Science Education, CASE, curricular materials provide a high level of STEM educational experiences to students to enhance the rigor and relevance of agriculture, food, and natural resources (AFNR) subject matter.

Program Summary:

As populations increase, productive agricultural land area decreases and food quality needs mount, the agriculture industry must have access to the best problem-solvers and scientists to address those issues.

The purpose of “The CASE for Agricultural Science Education in Iowa” is for the Iowa FFA Foundation, in partnership with ag stakeholder groups, and Regional STEM Hubs, to promote stronger agriscience and STEM educational programming. The audience will include secondary instructors, industry and support organizations related to agricultural education in Iowa, with far-reaching impacts on Iowa’s 16,000+ agriculture education students.

Improving instructional delivery systems, expanding student career opportunities, increasing instructional competencies in STEM and CORE content areas (particularly science), and interaction between academic institutions will enhance career readiness. In 2012, Iowa imported 1906 H-1B visas for STEM careers that were unable to be filled by domestic supply.

The agriculture industry, encompassing multiple STEM careers, will benefit from better prepared students and employees through the increased rigor and relevance of CASE courses. Iowa’s agriculture industry is thriving but there is one obstacle: the availability of an educated, prepared workforce. To overcome this obstacle, a well-prepared contingency of secondary agriculture teachers trained in student-centered, inquiry-based pedagogy using a nationally developed curriculum is needed.

Project Description/Objectives

- Adoption of “Curriculum for Agriscience Education” (CASE) in secondary agriculture education programs.
- Provide data-collection equipment to provide students with technology skills for careers in agriscience.
- Development of uniform Programs of Study through secondary and post-secondary linkages including concurrent enrollment of college credits, providing a seamless educational experience for students.
- Provide purposeful enhancement of science, mathematics, and English language understanding.
- Utilize science inquiry for lesson foundation and concepts are taught using activity-, project-, and problem-based instructional strategies.

Grade Levels: 9-12

What is Provided by the Project

The program will provide:

Professional Development - CASE Curriculum Institute (including the following)

- Two week professional development institute
- Curriculum Packet - 172 ready to implement lessons cross walked with national content standards
- Access to CASE Communities of Practice network
- Continual course updates
- Meals & lodging during curriculum institute (if in Iowa)

Equipment / Supplies - Provide funds to purchase needed CASE equipment / supplies from secured vendors in the amount allotted by the grant.

What is Required by the School or Local Education Agency (LEA) in Order to Implement This Program:

It will be expected that the educator and his/her organization (School) will:

Sign and return the agreement form on or before the designated deadline

Register to attend a Professional Development institute

Attend a training webinar on equipment needs

Complete equipment orders on or before designated deadline

Attend a two week Professional Development institute during the summer of 2015

Implement the chosen CASE course beginning with the Fall semester of 2015

Website to View Program and Standards Alignment : <http://www.iowaffafoundation.org/casescale-up.aspx>

Program Video: <https://www.youtube.com/watch?v=8MK0bPAq3Tw>